MITHIL DUDAM

Dubai, United Arab Emirates

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Education

BITS Pilani, Dubai   **Sep. 2021 – Aug 2025**
Bachelor of Engineering in Computer Science   *DIAC City, Dubai*
CGPA:8.97

Relevant Coursework

- Data Structures
- Database Management
- Artificial Intelligence
- Machine Learning
- Deep Learning
- Data Mining
- Object Oriented Programming

Experience

Spark XI   **Aug 2025 – Present**
Backend Development Intern | Python, Selenium, PostgreSQL, AI, Automation   *Dubai, UAE*

- Built end-to-end automation pipelines for user onboarding and multi-platform integration, leveraging Selenium and emulators.
- Developed secure systems for user data generation, storage, and encryption, ensuring data protection.
- Automated email and social media workflows, including verification and content publishing
- Integrated AI-driven content generation and computer vision tools (YOLO) to support dynamic content creation and account management.

KPTAC Technologies   **Jan 2025 – July 2025**
Software Development Intern | Python, React, TypeScript, FastAPI, PostgreSQL, Ollama, Langchain   *Dubai, UAE*

- Built a social media app enabling user registration, login, profile editing, and real-time chat features.
- Developed a secure forgot password system with automated email delivery using Selenium scripting.
- Integrated real-time broadcast and private messaging using WebSockets for seamless communication.
- Designed and managed database structures for users, posts, and chats with PostgreSQL.
- Implemented online/offline user status indicators to enhance chat engagement and user visibility.
- Integrated an AI-powered chatbot to provide users with conversational support when no real-time users are available.

Projects

Agentic LLM with Tool-Use & Memory | *Python, FastAPI, Ollama, LangChain, LangGraph*   **Aug 2025 - Sept 2025**

- Built an agentic LLM system integrating 7 real-world tools (web search, calculator, weather, APIs) with LangGraph for orchestration.
- Implemented session-based memory for contextual multi-turn reasoning and structured JSON outputs for safe downstream use.
- Deployed a FastAPI backend with a React-based chat interface, visualizing live agent reasoning and responses.

Local Hybrid RAG Assistant | *FastAPI, LangChain, LangGraph, Ollama, ChromaDB, React*   **Aug 2025 - Sept 2025**

- Developed a hybrid RAG pipeline combining dense (mxbai) and sparse (BM25) retrieval for querying PDF and CSV data.
- Implemented a LangGraph router to dynamically route user queries based on document type.
- Built an end-to-end local AI system with secure, privacy-first document ingestion and real-time query responses.

Diabetes Risk Prediction Using AI Agent | *scikit-learn, pandas, FastAPI, Ollama, React*   **Sept 2025 - Oct 2025**

- Trained an SVM-based classifier for diabetes risk prediction, performing EDA, feature scaling, and model validation.
- Integrated llama3.2 as an explainability agent, generating natural-language reasoning for model predictions.
- Built a full-stack app for real-time predictions and personalized AI-driven health feedback.

Awards/Extracurricular/Leadership

Winner of Escape The Matrix in BITS Tech Fest - Enginuity 2024 among 20+ participants (2024)

Technical Skills

Languages: Python, Java, C, HTML, SQL, TypeScript, CSS
Databases: MySQL, PostgreSQL
ML & AI: NumPy/Pandas, Matplotlib, Scikit-Learn, TensorFlow, OpenCV, PyTorch, Langchain, Ollama
Web Development: HTML, JavaScript, Tailwind CSS, React
Developer Tools: VS Code, Jupyter Notebook, Google Colab, GitHub